

REMARKS

Applicants respectfully request reconsideration and allowance of the above-identified patent application. By this paper, claims 1-22, 24-31, and 33-38 remain pending, wherein claims 1, 30, 31, 33, and 37 are independent, and claim 37 has been amended.¹

Initially, Applicants and Applicants' attorney express appreciation to the Examiner for the courtesies extended during the recent interview held on August 17, 2007. The arguments submitted in this paper are consistent with those presented during the course of the interview. Applicants also note with appreciation the Examiner's withdrawal of the previous grounds of rejection.

The Office action rejects pending independent claims 1, 30, 31, 33, and 37 under 35 U.S.C. § 103(a) as allegedly being unpatentable over U.S. Patent No. 5,748,896 to Daly et al. ("*Daly*") in view of U.S. Patent No. 5,701,451 to Rogers et al. ("*Rogers*") and further in view of U.S. Patent No. 5,659,787 to Schieltz ("*Schieltz*"). The Office action rejects the remaining dependent claims as allegedly being unpatentable under 35 U.S.C. § 103(a) over the combination of *Daly*, *Rogers*, and *Schieltz*, and/or further in view of U.S. Patent No. 5,230,051 to Quan ("*Quan*") and/or U.S. Patent No. 5,809,161 to Auty et al. ("*Auty*").² For at least the following reasons, Applicants respectfully traverse these grounds of rejection.

As discussed during the interview, Applicants' invention generally relates to monitoring the performance of services using a polling server system. In order to reduce the overhead associated with typical piecemeal query-and-reply operations, Applicants' advantageously provide for generating a single query requesting a compilation of operating status information about the services offered by a single server. The monitored server system then compiles and sends the requested status information for each service into a single reporting reply, which significantly reduces the burden of receiving multiple requests and/or sending multiple replies for each individual service.

Notwithstanding the above advantageous features, there are instances where the additional polling is necessary. For example, where a deficiency in system performance occurs,

¹ Support for the claim amendments can be found throughout the specification; for example, support may be found in the following pages and lines: p. 4, ll. 19-23 and p. 13, l. 12 through p. 15, l. 10. Accordingly, Applicants respectfully submit that no new matter has been added.

it may be desirable to obtain more status information about the deficiency. Accordingly, as an additional enhancement, embodiments provide that the compilation of information may include performance deficiencies detected in the monitored server system. When a deficiency is detected in a polling of the monitored server system, the service and/or monitored server system may be listed in a server system list, e.g., a critical server system list. As such, the polling server system may poll the critical (or other) server or service systems more frequently since the monitoring of the server system performance is typically more important once an operation deficiency is detected.

Independent claim 1 is directed towards some of the embodiments described above and recites a method of enhancing performance monitoring for a server system by decreasing the number of queries generated to monitor the performance of a plurality of various servers provided. The method of claim 1 is from the perspective of the polling server system and includes the steps of: generating a single query requesting a compilation of information about the performance of a plurality of different services offered by a monitored server system; transmitting the single query from the polling server system to the monitored server system; and receiving one reply that includes the compilation of information about the performance of the plurality of the different services offered by the monitored server system, without receiving the information about the performance of the plurality of the different services in a piecemeal fashion. By way of example only, some of the plurality of different services offered by a monitored server system may include a directory service, a message store service, a message transfer agent service, etc. As can be seen, by including the compilation of information about the performance of the plurality of different services offered by the monitored server system into one reply, the polling time is advantageously reduced since the information is not transmitted or received in a piecemeal fashion.

In addition to the above advantageous features, claim 1 was previously amended to include a step of using the compilation to update at least a first and a second server system list with information on the monitored server system, wherein server systems included within the first server system list are polled more frequently than server systems. For example (as more explicitly stated, e.g., in independent claim 37), when a service from the monitored server system

² Although the prior art status of the cited references are not being challenged at this time, Applicants reserve the right to do so in the future. Accordingly, any arguments and amendments made herein should not be construed

is found to have a deficiency (e.g., directory service is in a non-functioning state), such service can be included in a critical systems list. On the other hand, services that are performing properly are associated with normal server systems. Services (or servers) listed in the critical systems list are then polled more frequently than those that operate in a normal status in order to determine, e.g., when the system is functioning properly. Note that the other independent claims contain similar language for coverage of different aspects and embodiments (e.g., from the perspective of the monitored server system and/or computer program product claims).

Applicants respectfully submit that the cited art fails to render the current claims unpatentable for at least the reason that the Office action has not established a *prima facie* case of obviousness.³ More specifically, Applicants submit that these cited references do not disclose, suggest, or enable each and every element of the Applicants' claims. In addition, Applicants submit that one of skill in the art would not combine the reference teachings in the manner suggested by the Office.

For example, the combination of *Daly*, *Rogers*, *Schieltz*, *Quan*, and/or *Auty*—taken either individually or as a whole—does not disclose, suggest, or enable generating a single query requesting a compilation of information about the performance of a plurality of different services offered by a monitored server system; transmitting the single query from the polling server system to the monitored server system; and receiving one reply that includes the compilation of information about the performance of the plurality of the different services offered by the monitored server system, without receiving the information about the performance of the plurality of the different services in a piecemeal fashion, as recited, *inter alia*, in claim 1. In addition, the combination does not disclose, suggest, or enable the feature of using the

as acquiescing to any prior art status or asserted teachings of the art of record.

³ “A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” MPEP § 2131. That is, “for anticipation under 35 U.S.C. 102, the reference must teach every aspect of the claimed invention either explicitly or impliedly.” MPEP § 706.02. Applicants also note that “[i]n determining that quantum of prior art disclosure which is necessary to declare an applicant's invention ‘not novel’ or ‘anticipated’ within section 102, the stated test is whether a reference contains an ‘enabling disclosure.’” MPEP § 2121.01. In other words, a cited reference must be enabled with respect to each claim limitation.

In order to establish a *prima facie* case of obviousness, “the prior art reference (or references when combined) must teach or suggest all the claim limitations.” MPEP § 2143 (emphasis added). In addition, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the references or to combine reference teachings. MPEP § 2143. During examination, the pending claims are given their broadest reasonable interpretation, i.e., they are interpreted as broadly as their terms reasonably allow, consistent with the specification. MPEP §§ 2111 & 2111.01. Finally,

compilation to determining a deficiency in the different services and updating a critical server system lists with information about the deficient service in order to poll such monitored server system more frequently than services associated with normal server systems, as recited, *inter alia*, in claim 37.

As generally agreed to during the Examiner interview, the Office primarily relies on the combination of *Daly*, *Rogers*, and *Schieltz* as allegedly disclosing the features in claim 1. *Daly* discloses a system for managing services distributed among various network servers. Although *Daly* provides a mechanism for generating a single request for retrieving status data about instantiations of multiple service components (e.g., file service, print service, email service, etc.), *Daly* does not disclose that the information about the performance of the services is compiled into one reply from a monitored server system. In fact, as previously alluded to, because the services of *Daly* are distributed amongst *numerous network servers*, even though *Daly* sends a single request to the multiple servers, *Daly* must receive *multiple replies* about the status of the services *from each server*. This is in stark contrast to the *compilation of a single reply about performance information for services offered by one monitored server system* as currently claimed, e.g., in claim 1.

Noting the above deficiency in *Daly*, the Office action cites *Rogers*. *Rogers* discloses a method for fulfilling requests of a web browser client. More specifically, *Rogers* is directed towards compiling query results for a user surfing the Web. *Rogers*, however, is not concerned with monitoring service performance, but instead simply requests services provided by various distributed servers. As such, *Rogers* cannot possibly disclose or suggest generating and/or receiving query results about the *performance* of a plurality of services offered by a monitored server. Notwithstanding this difference, however, *Rogers* also suffers from similar deficiencies as those noted above with regards to *Daly*. More specifically, *Rogers* generates a single request to retrieve information from *multiple databases* when processing commands from the user's client. Although *Rogers* provides an agent (i.e., DIS server) that compiles the results of the client request, like *Daly* the agent of *Rogers* must receive *multiple replies* from the numerous databases or services before sending the compilation of results. As such, *Rogers* cannot possibly rectify those deficiencies noted above with regard to *Daly* (i.e., like *Daly*, *Rogers* does not

Applicants note that MPEP § 2141.02 states that the cited references must be considered as a whole, including those sections that “teach away” from the claimed invention. (Citation omitted).

disclosing or suggest the *compilation of a single reply about performance information for services offered by one monitored server* system as currently claimed).

Noting the deficiencies of both *Daly* and *Rogers*, the Office action cites *Schieltz*. *Schieltz* discloses a data communication network with a defined polling procedure. Similar to *Rogers*, however, *Schieltz* is not concerned with the performance of services offered by a monitored server system. Instead, *Schieltz* monitors video surveillance systems. Nevertheless, assuming that video surveillance cameras and other equipment suggest a server system of a distributed network, *Schieltz* suffers from similar and other deficiencies as those noted above with regard to both *Daly* and *Rogers*. More specifically, *Schieltz* sends a single request to each different device in the video system, and in response receives a single reply from the particular device. In other words, *Schieltz* discloses a one-to-one correspondence between a polling request and the response, which is even more like the prior art than both *Daly* and *Rogers* noted above. Apparently noting such deficiency, the Office action relies on *Schieltz* as allegedly disclosing Applicants' claimed features of separating the results of the performance compilation into different lists, and polling services from one list more frequently than the others (as discussed in greater detail below with regard to claim 37). As such, *Schieltz* cannot possibly disclose, suggest, or enable the *compilation of a single reply about performance information for services offered by a monitored server* system as recited, *inter alia*, in claim 1.

Claim 37 has features similar to those described above with regard to claim 1; and therefore, claim 37 is also patentably distinguishable over the cited art of record for at least those reasons stated above. As previously mentioned, claim 1 also includes an additional feature of using the compilation to update server system lists in order to adjust polling frequency for services in each list. Claim 37 describes this feature in greater detail by essentially updating a critical server system list based on compilation information about one or more deficient services for such monitored server system. Services or servers listed within the critical list (i.e., those with deficiencies) are then polled more frequently than those that are operating normally.

Noting the deficiencies of *Daly* and *Rogers*, The Office primarily relies on *Schieltz* as allegedly disclosing these features. As previously mentioned, *Schieltz* discloses a polling mechanism to gather information about surveillance video systems. Although *Schieltz*'s divides device polling frequency into different classes based on the responsiveness of a device, *Schieltz* polls defective devices in an opposite manner than currently claimed. For example, in describing

the polling feature outlined in the flow diagram of Fig. 3, (*see* col. 10, ll. 10-43), *Schieltz* states that each device is assigned to either “a preferred class X or to a subordinate class Y.” When a device of a “class X” has been unresponsive to a number of polls, it is assumed that the device is turned off or otherwise inoperable; and therefore, the problem device is “reassigned to class Y”. As stated in col. 9, ll. 58-60, devices in the “preferred” class (i.e., class X) are polled more frequently than those in the “subordinate class” (in this example, class Y). In other words, *Schieltz*’s system *reduces* the polling frequency of devices with deficiencies, which is the exact opposite of the claimed invention as described in claim 37. In other words, *Schieltz* cannot possibly disclose, suggest, or enable polling deficient services and/or services included in a critical list *more frequently* than those systems operating normally. As such, in addition to the above noted deficiencies described regarding claim 1, *Schieltz* does not render claim 37 unpatentable.

Noting some of the deficiencies of *Daly*, *Rogers*, and *Schieltz*, the Office action cites the *Quan* and *Auty* references. The Office action relies on these references as allegedly disclosing or suggesting features described in other various dependent claims. As such, Applicants respectfully submit that these cited references cannot possibly rectify those deficiencies noted above with regards to *Daly*, *Rogers*, and *Schieltz*. As such, claims 1 and 37 are patentably distinguishable over the cited art of record for at least the reason that these references fail to disclose, suggest, or enable each and every element of these claims.

In addition to the above, the Office action fails to establish a *prima facie* case of obviousness since one of skill in the art would not combine the reference teachings in the manner suggested. For example, *Daly*, *Rogers*, and *Schieltz* each “teach away” from the claimed invention. Further, both *Rogers* and *Schieltz* are non-analogous art.

For example, as noted above, *Daly*, *Rogers*, and *Schieltz* each obtain results of their requests in a “piecemeal fashion”. As such, each of these references “teach away” from Applicants’ claimed invention, which receives performance information for different services in a single compilation. Further, as also mentioned above, *Schieltz*’s system decreases the polling frequency of devices that are unresponsive, and therefore further “teaches away” from some of Applicants’ features that increase polling frequency for services with deficiencies noted in a critical systems list. In addition, neither *Rogers* nor *Schieltz* even mention monitoring service performance, but instead are directed toward Web surfing and video surveillance, respectively.

In other words, since the systems described in *Rogers* and *Schieltz* in no way address the concerns associated with performance problems of services or servers, these references are not analogous art. . As such, the Office further fails to establish a *prima facie* case of obviousness when relying on these cited references.

As previously mentioned, the other independent claims (i.e., claims 30, 31, and 33) recite methods and computer program products with elements similar to those discussed above with regard to claims 1 and/or claim 37. As such, Applicants respectfully submit that these claims are patentably distinguishable over the cited art of record for at least those reasons stated above. Therefore, Applicants respectfully request withdrawal of these grounds of rejection as well.

Based on the foregoing reasons and others as discussed in the interview, Applicants respectfully submit that the cited prior art fails to anticipate or make obvious Applicants' invention, as claimed for example, in independent claims 1, 30, 31, 33, and 37. Applicants note for the record that the remarks above render the remaining rejections of record for the independent and dependent claims moot, and thus addressing individual rejections or assertions with respect to the teachings of the cited art is unnecessary at the present time, but may be undertaken in the future if necessary or desirable, and Applicants reserve the right to do so.

All objections and rejections having been addressed, Applicants respectfully submit that the present application is in condition for allowance, and Applicants earnestly solicit notice to this effect. Nevertheless, should any question arise in connection with this application or should the Examiner believe that a telephone conference with the undersigned would be helpful in resolving any remaining issues pertaining to this application, the undersigned respectfully requests that he be contacted at +1.801.533.9800.

DATED this 28th day of September, 2007.

Respectfully Submitted,

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